UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 6-K

REPORT OF FOREIGN PRIVATE ISSUER PURSUANT TO RULE 13a-16 OR 15d-16 UNDER THE SECURITIES EXCHANGE ACT OF 1934

For the month of April 2024

Commission File Number: 001-36891

Cellectis S.A. (Exact Name of registrant as specified in its charter)

8, rue de la Croix Jarry 75013 Paris, France +33 1 81 69 16 00 (Address of principal executive office)

Indicate by check mark whether the registrant files or will file annual reports under cover of Form 20-F or Form 40-F. Form 20-F [X] Form 40-F []

EXHIBIT INDEX

Exhibit Title

99.1 Press Release dated April 8, 2024

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Cellectis S.A.
(Registrant)

Date: April 8, 2024

/s/ André Choulika
André Choulika
Chief Executive Officer

Cellectis Announces Two Poster Presentations on Novel TALEN® Editing Process for Gene Correction and Gene Insertion in HSPCs at the ASGCT Annual Meeting

NEW YORK, April 08, 2024 (GLOBE NEWSWIRE) -- Cellectis (the "Company") (Euronext Growth: ALCLS - NASDAQ: CLLS), a clinical-stage biotechnology company using its pioneering gene-editing platform to develop life-saving cell and gene therapies, today announced that preliminary data exploring novel TALEN® editing process in hematopoietic stem and progenitor cells (HSPCs) will be presented at the American Society of Gene and Cell Therapy (ASGCT) 27th Annual Meeting, to be held in Baltimore, Maryland, on May 7-11, 2024.

Poster presentations:

Title: Circularization of Non-Viral Single-Strand DNA Template for Gene Correction and Gene Insertion Improves Editing Outcomes in HSPCs

Presenter: Alex Boyne, Gene Editing Platform Manager at Cellectis

Session Date/Time: May 9, 2024 at 12PM ET

Session Title: Nonviral Therapeutic Gene Delivery and Synthetic/Molecular Conjugates

Presentation Room: Exhibit Hall **Final Abstract Number:** 1235

Cellectis presents the development of a novel gene editing process, leveraging the TALEN® technology and non-viral DNA template delivery, enabling highly efficient gene correction and gene insertion in hematopoietic stem and progenitor cells (HSPCs).

Title: Intron Editing of HSPC Enables Lineage-Specific Expression of Therapeutics

Presenter: Julien Valton, Ph.D., Vice President Gene Therapy at Cellectis

Session Date/Time: May 5, 2024 at 12PM ET

Session Title: Gene Targeting and Gene Correction New Technologies

Presentation Room: Exhibit Hall **Final Abstract Number:** 721

Gene therapy using hematopoietic and progenitor stem cells (HSPC) has the potential to provide a lifelong supply of genetically encoded therapeutics. Gene editing strategies enabling supra-endogenous expression of therapeutics often rely on constitutive promoters resulting in transgene overexpression irrespective of cellular differentiation, which could be detrimental for HSPC function. Cellectis presents the development of a TALEN® mediated promoter-less intron editing strategy that relies on the endogenous cellular RNA splicing machinery to induce lineage-specific transgene expression exclusively after HSPC differentiation.

Full abstracts and presentations will be available on Cellectis' website following the event: https://www.cellectis.com/en/investors/scientific-presentations/

About Cellectis

Cellectis is a clinical-stage biotechnology company using its pioneering gene-editing platform to develop life-saving cell and gene therapies. Cellectis utilizes an allogeneic approach for CAR-T immunotherapies in oncology, pioneering the concept of off-the-shelf and ready-to-use gene-edited CAR T-cells to treat cancer patients, and a platform to make therapeutic gene editing in hemopoietic stem cells for various diseases. As a clinical-stage biopharmaceutical company with over 24 years of experience and expertise in gene editing, Cellectis is developing life-changing product candidates utilizing TALEN[®], its gene editing technology, and PulseAgile, its pioneering electroporation system to harness the power of the immune system in order to treat diseases with unmet medical needs. Cellectis' headquarters are in Paris, France, with locations in New York, New York and Raleigh, North Carolina. Cellectis is listed on the Nasdaq Global Market (ticker: CLLS) and on Euronext Growth (ticker: ALCLS).

Forward-looking Statement

This press release contains "forward-looking" statements within the meaning of applicable securities laws, including the Private Securities Litigation Reform Act of 1995. Forward-looking statements may be identified by words such as "has the potential," and "will," or the negative of these and similar expressions. These forward-looking statements, which are based on our management's current expectations and assumptions and on information currently available to management. Forward-looking statements include statements about the potential of our R&D programs. These forward-looking statements are made in light of information currently available to us and are subject to numerous risks and uncertainties, including with respect to the numerous risks associated with biopharmaceutical product candidate development. Furthermore, many other important factors, including those described in our Annual Report on Form 20-F and the financial report (including the management report) for the year ended December 31, 2022 and subsequent filings Cellectis makes with the Securities Exchange Commission from time to time, as well as other known and unknown risks and uncertainties may adversely affect such forward-looking statements and cause our actual results, performance or achievements to be materially different from those expressed or implied by the forward-looking

statements. Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to update the reasons why actual results could differ materially from those anticipated in the forward-looking statements, even if new information becomes available in the future.

For further information on Cellectis, please contact:

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Attachment

• ASGCT 2024-curtain raiser (https://ml.globenewswire.com/Resource/Download/114e0623-ee01-44b7-9871-b493a0878e5d)